MANUAL

G5 AUTOMATIC GYROSCOPIC MIXER

SANTINT 三华

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Preface

Thanks for purchasing "SANCN" gyroscopic mixer!

This user's manual provides general information on installation, usage and maintenance of our gyroscopic mixer. Any improper use will shorten its longevity. Read this manual completely and carefully before installation, use and maintenance of the machine. The manual should be kept in a place convenient for future reference.

For any questions, please do not hesitate to contact our service team.

General

G5 Automatic Gyroscopic Mixer is designed for paint mixing with main features:

- Ergonomic design and opaque viewing door facilitate observation of mixing process.
- Viewing door with electronic lock to protect the mixer from starting up while the door is open, and to stop the door from being opened in the process of operation.
- LCD Control Panel serves to display each step of operation or any possible trouble, convenient for operation.
- Integrated Control Board can adjust speeds by multi-segment intelligent frequency conversion system.
- The machine can automatically detect the height of paint can and choose mixing speed accordingly.
- Two motors are installed to control mixing and clamping separately. This ensures safety and reliability of operation.
- Electromagnetic brake mechanism provides good protection to both operators and paint cans.
- Well-closed structure enables the machine to work under more hazardous surroundings.
- The machine is equipped with castors, easy to move.

Technical Specifications

Power Supply: Single Phase AC; Voltage and frequency: see the nameplate on the back of the machine.

Power: 0.75kW

Mixing Speed: Low 125r/min, Middle 150 r/min, High 200r/min

Available Space Between Upper and Bottom Plate: 80mm-452mm

Volume of Paint Can to be Mixed: 1L～20 L

Paint Can to be Mixed: Diameter: 50-360mm; Height: 90mm～400 mm

Mix cycle time: ___s,___ s, ___ s …… ___s

Dimensions: 760 x 850 x1033 mm

Net Weight : 198kg

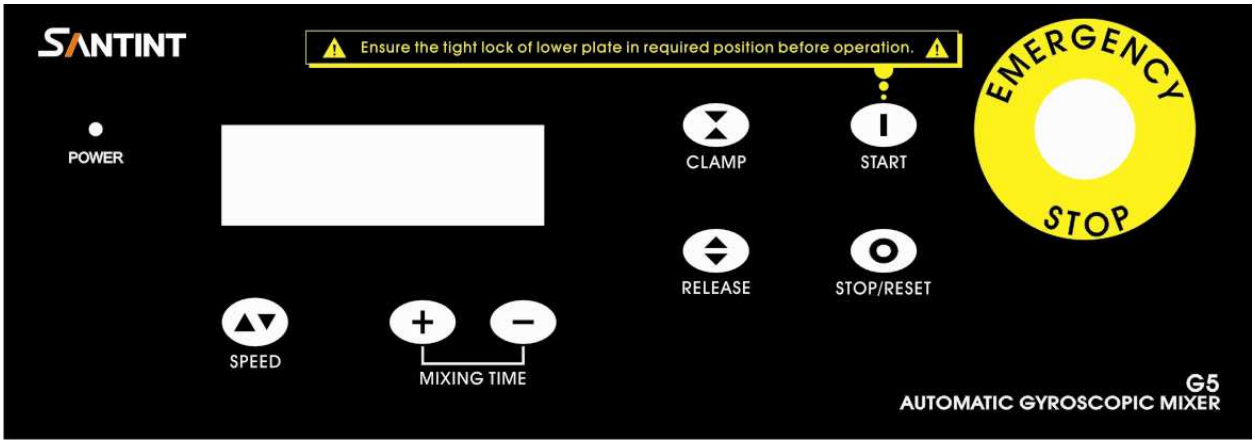
Noise Level: <70dB（A）

Safety and Environmental Aspects

- Do not use a damaged machine. If there is any doubt, please first contact our service team or your supplier.
- Comply with all local safety instructions and regulations.
- Read this manual carefully before installing and using the machine.
- Keep this manual in a place which is easy to reach and easy to see.
- Power Supply: Current:15A; Voltage and frequency: see the nameplate in the back of the machine. Ambient Working Temperature: 5℃～50℃. Relative humidity required: 15%-90%.
- Never allow young persons to stay close to the machine.
- Before using the machine, be sure that the outlet used for power supply is equipped with earth wire.
- Before carrying out any repairs or maintenance, do remember to disconnect the machine. It is strictly prohibited to perform repairs or maintenance before disconnecting the machine or when the machine is working.
- Do not use an improper extension cable. Please disconnect the mixer when not used for a long time.
- Adjust the four feet to make sure the machine stands levelly and steadily on the ground. Keep the castors away from the ground to avoid vibrations.

Structure of the Machine

Layout of LCD & Control Panel



Nameplate

Installing the Machine

For your safety and convenience, we have carefully assembled and tested the machine.

To install the machine:

- Cut apart bindings and unpack wooden crate.
- Move the machine to desired working site.
- Adjust the feet until all casters leave the ground. Make sure that the machine is standing steadily. This must be done accurately so that the machine can function correctly.

Attention!

1. Make sure that the floor is stable and level.
2. Be sure to leave adequate space around the machine for ventilation, cleaning , inspection and maintenance activities.
3. Read the instructions carefully before using the machine and ensure that any other users are also aware of these instructions, especially in respect of safety.

Buttons on Control Panel

Stop/Reset To reset parameters (for example, time and speed), press this button first. The mixer will stop working and restore to normal condition. LCD displays "Resetting".

Release Press this button to release the clamping plate and LCD displays "Releasing".

Clamp Press this button and the clamping plate begins to clamp. LCD displays "Clamping".

+ **-** The programmed time will increase or decrease by___seconds on each button press. Time range is between ___ seconds and_____seconds. When pressing any two buttons simultaneously, time will be memorized and "Mixing Time Saved" will be shown on LCD. When restarting the mixer, LCD displays the latest set time. The default mixing time is _____seconds.

Speed Speed Setting. Press this button to set Low, Medium or High Speed in cycle. "Middle Speed" is set as default when the machine just begins to work.

Start Press this button to start the machine. LCD displays "Mixing" and time begins to count down.

Emergency Stop When encountering any abnormities, press this button at once to stop the machine from working. LCD displays "Emergency Button Pressed". To restart the machine, rotate the button clockwise to release it. Then press "Stop/Reset" button so that the machine can recover to normal condition.

Volume of Paint Can to be Mixed and Speed Choice

Paint Can Size	**High Speed 200r/min**	**Medium Speed 150r/min**	**Low Speed 125r/min**	**Remarks**
1L				Minimum Height: 90mm
5L				
20L				Maximum Weight: 35kg

Testing and Operating the Machine

1) Connect the machine and switch it on. Connect the machine to proper voltage supply. The LCD displays "Please Wait". Press speed button and "+、-"button simultaneously and the LCD displays the already mixing times. Press the "Emergency Stop" button and then release it. The machine is ready to mix when LCD displays "Ready". If LCD displays "Emergency Button Pressed", release the Emergency Stop button by rotating it clockwise. If LCD displays "Press Stop/Reset Button", press the button to restore the machine.
2) Make sure the paint can is well sealed, the handle is well fastened and secured to prevent rattling and damage to the can.
3) Press Release or Clamp button to adjust the distance between the clamping plate and the bottom plate until it fits in with the height of paint can.
4) Open the viewing door, push upwards the lock handle of the bottom plate and pull out the bottom plate. Put paint can on the bottom plate. Take into account can size and quantity, make sure that the center of gravity of the can must as far as possible be in the center of the bottom plate. Push back the bottom plate. **Then try pulling it out and pushing it back again to confirm if it is well locked**. Close the viewing door. If the door is not completely closed, the LCD will display "Door Open" when the Start button is pressed.
5) Set mixing time by pressing corresponding button. The initial mixing time is 180 seconds. Press "+" "-" buttons simultaneously to save the time set and LCD displays "Mixing Time Saved".
6) Set proper mixing speed (see "**Volume of Paint Can to be Mixed and Speed Choice**").
7) The clamping plate clamps automatically and the machine starts to mix. LCD displays "Mixing" and the remaining time. In case the parameter is incorrect or abnormal, press Stop/Reset button. Then press the Start button.

8) In the process of mixing, pay attention to the working condition of the machine. The machine will stop automatically with "Wait Please" on LCD when the time set is reached. LCD displays "Mixing Finished" and the clamping plate releases automatically. In case there is any abnormal noise, press the Emergency Stop button to stop the machine.

9) Open the viewing door, pull out the bottom plate and take out the paint can.

10) Repeat the above steps 2)-9).

Warnings

- Make sure the paint can is well closed and the handle is well fastened and secured to prevent rattling and damage to the can.
- In case there is any abnormal noise, press the Emergency Stop button to stop the machine. Find and solve the problem before restarting the machine.
- The paint can should be strong enough and in good shape. It is strongly recommended not to use severely deformed cans.
- The bottom plate must be pushed to the desired position. It is a good habit of pulling out the bottom plate after placing paint cans on it and then push it back to confirm that it is locked well. Otherwise it may cause accident.
- In the process of mixing, if the speed is too low or there is any abnormity, press Emergency Stop button immediately. Otherwise this may damage the motor or the frequency converter.
- Do not open the viewing door during mixing. The attempt to open it by force may cause damage.
- Only qualified personnel are allowed to disassemble and test the machine.
- Place (a) paint can(s) on the bottom plate so that they are (it is) centered as well as possible.

Maintenance

This gyro mixer has been designed to require as little maintenance as possible. Yet routine maintenance needed to ensure that the machine remains in good working condition and has a long service life.

Attention!

- Before carrying out any maintenance, make sure that the machine has been unplugged from the socket.
- Any unqualified personnel are on no account allowed to disassemble the machine.

- Keep the interior of the machine clean and wipe off paint on the side screws and the guide shafts with a piece of wet cloth.
- Lubricate the side screws and guide shafts every three months.
- Lubricate the cone-gear transmission system once every six months.
- Open the back cover to check belt tension every year.

Troubleshooting:

Problems	Causes	Action
No message on LCD	1. No connection with power supply	Check if the main switch is switched on, or if main cable is properly connected
	2. Fuse or wire of power supply is broken.	Replace fuse or wire of power supply.
LCD displays "System Trouble"	1. Clamping plate is beyond height limit.	1. Shorten the distance between the upper and the lower plates.
	2. Belt is loose.	2. Tighten the belt properly.
	3. Contactor is broken.	3. Replace the contactor.
	4. Connection wire is broken	4. Connect the wire.
	5. Clamping motor is defective.	5. Repair or replace clamping motor.
	6. Inverter is defective.	6. Repair or replace the inverter.
	7. The voltage is too high, over ____ V	7. Take actions as install a voltage-stabilizer to lower the voltage.
	8. The voltage is too low, under ____ V	8. Take actions as install a voltage-stabilizer to increase the voltage.
	9. The main motor is broken	9.Replace the main motor
LCD displays "Inverter Trouble"	The inverter is faulty..	Switch off machine and restart it in 3 minutes. If this problem occurrs for three times consecutively, replace the inverter.

The motor can work but machine can not shake.	The belt is loose	Tighten the belt properly.
LCD displays "Emergency Button Pressed"	1. Emergency Stop button is pressed.	Release it.
	2.The Emergency Stop button or its connection wire is broken	Replace the Emergency Stop button or reconnect the wire.
LCD displays "Door Open"	1. The door is not locked.	Lock the door.
	2. The inserts of the wire become loose or the wire is broken.	Insert the wire well or replace the wire.
Loud noise and extreme vibrations occurred during mixing.	1. The machine is not leveled well.	Adjust the feet of the machine to so that it can stand levelly and stably..
	2. The can(s) is (are) not in the central position.	Adjust the position of paint can(s).
	3. Improper speed selection.	Select the right mixing speed.
	4. Overloading.	Decrease the weight to be mixed..

Further more, for any problem, please can contact our local distributors or the manufacturer directly.

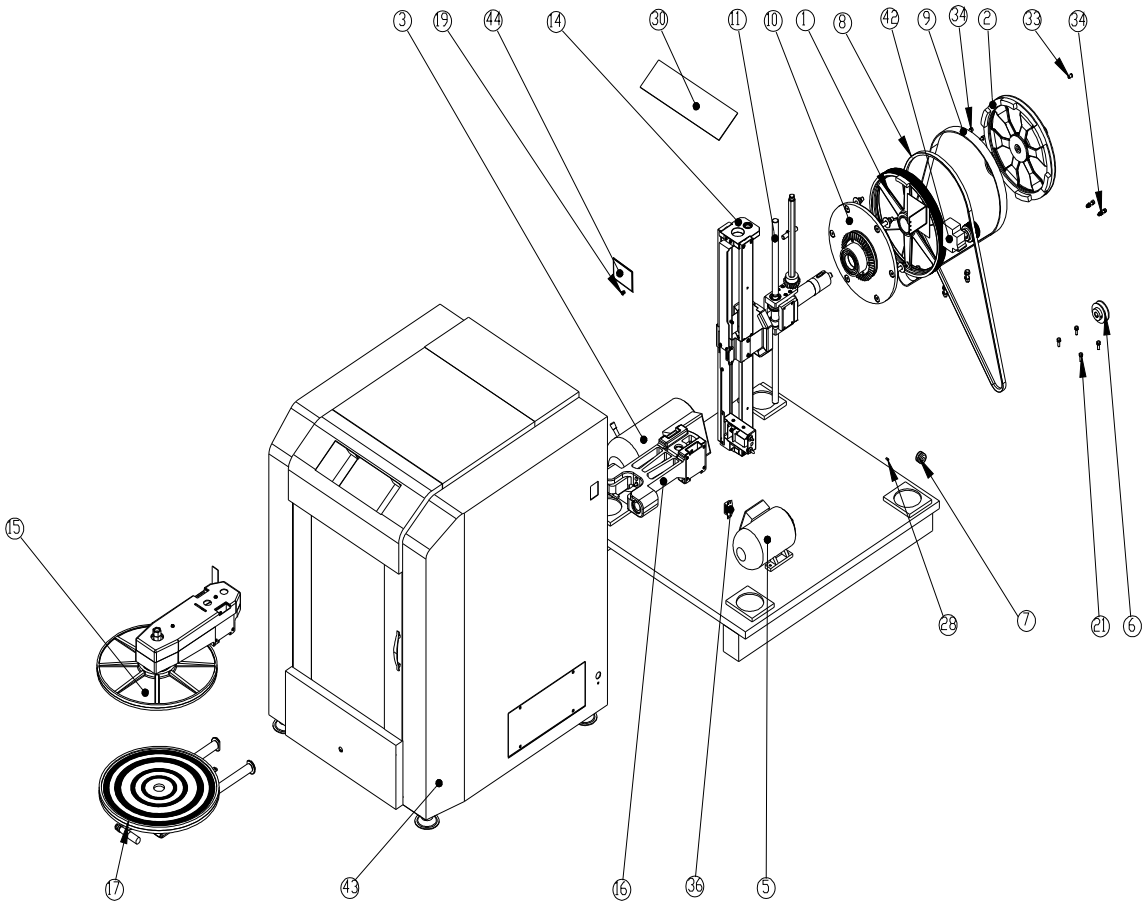
Tools

Descriptions	Quantity	Remarks
22-24mm open end Spanner	1	
Crosshead Screwdriver	1	

Circuit Diagram

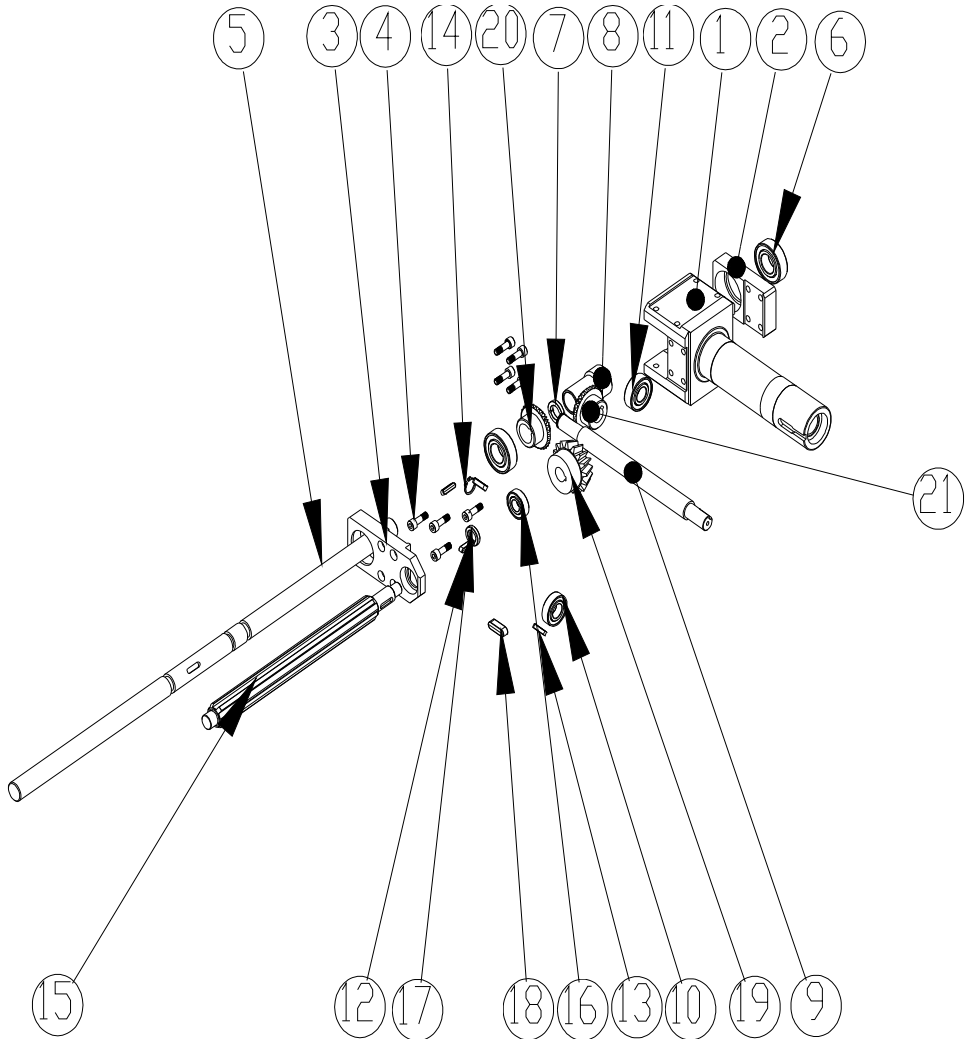
Explosive Drawings

General Assembly



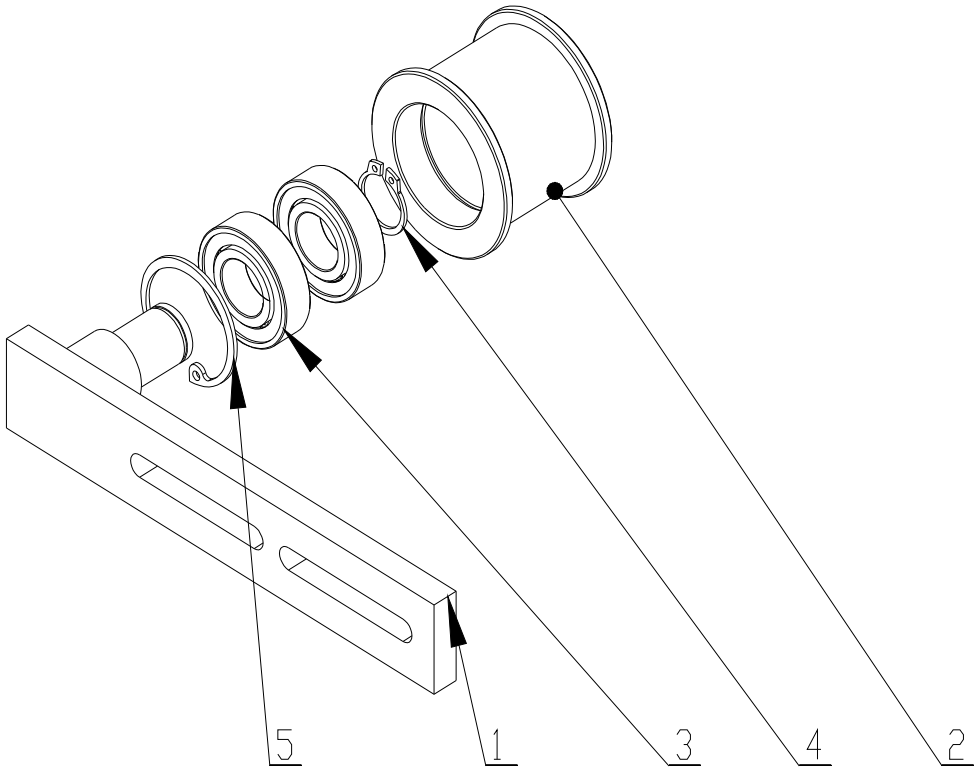
No.	Part No.	Description	Qty
1	SHH-VI.00-01	Big Pulley,Ribbed Belt	1
2	SHH-VI.00-03	Big Pulley,Clamping	1
3	YEJ80-4	750 Motor	1
4	SHH-VI.00-02	Small Pullley,Ribbed Belt	1
5	JW6314	180 Motor	1
6	SHH-VI.00-04	Pulley,Clamping Motor	1
7	PG11	Water Proof Connector	1
8	A1626	V-Belt	1
9	12PJ1651(650)	Ribbed Belt	1
10	SHH-VI.01	Big Flange Union	1
11	SHH-VI.05	Main Shaft Union	1
12	GB/T 812-1988	Round Nut M45x1.5	1
13	GB 858-1988	Lock Washer	1
14	SHH-VI.03	Guide Shaft Union	1
15	G5.04	G5 Clamping Plate Arm Assembly	1
16	G5.06	G5 Bottom Plate Arm Assembly	1
17	G5.07	G5 Active Base Union	1
18	GB892-86	Shaft End Circlip B28	1
19	GB95-85	Plain washer 5	5
20	GB/T 889.1-2000	M5 Locking Nut	5
21	GB/T 5780-2000	Hexagon Bolt M6x20	4
22	GB/T 97.2-1985	Plain Washer 6	12
23	GB/T 93-1987	Spring Washer 6	8
24	GB/T 5780-2000	Hexagon Bolt M8x30	4
25	GB/T 97.1-85	Plain Washer 8	8
26	GB/T 93-1987	Spring Washer 8	4
27	GB/T 6170-2000	Nut M8	4
28	GB/T 78-2000	Inner Hexagon Cone Head Screw M5x10	1
29	GB/T78-2000	Inner Hexagon Cone Head Screw M6x12	1
30		Front Control Board	1
31	GB/T 93-1987	Spring Washer 5	1
32	GB/T 70.1-2000	Inner Hexagon Cylinder Head Screw M5x16	1
33	GB/T17880.1-1999	Flat Head Riveted Nut M5	1
34	GB/T70.1	Inner Hexagon Cylinder Head Screw M6x25	4
35	GB/T6170-2000	Nut M6	4
36		Magnet For Cabinet Door	2
37	GB818-85	Crossed Pant Head Screw M3x8	1
38	1HS3-2-09-003	Side Wanring Label	1
39	1HS3-2-04-041	Name Plate	1
40	12V NPN LJ12A3-4-2/BX	Approach Sensor	1
41		Electrical Lock	1
42	DZ47-60 C15	Circuit Breaker	1
43	G5.02.01	Welded Covering Union	1
44	1HS3-2-06-006	Front Warning Label	1
45	SHH-VI.BZ.01	Wooden Case	1

Main Shaft Assembly



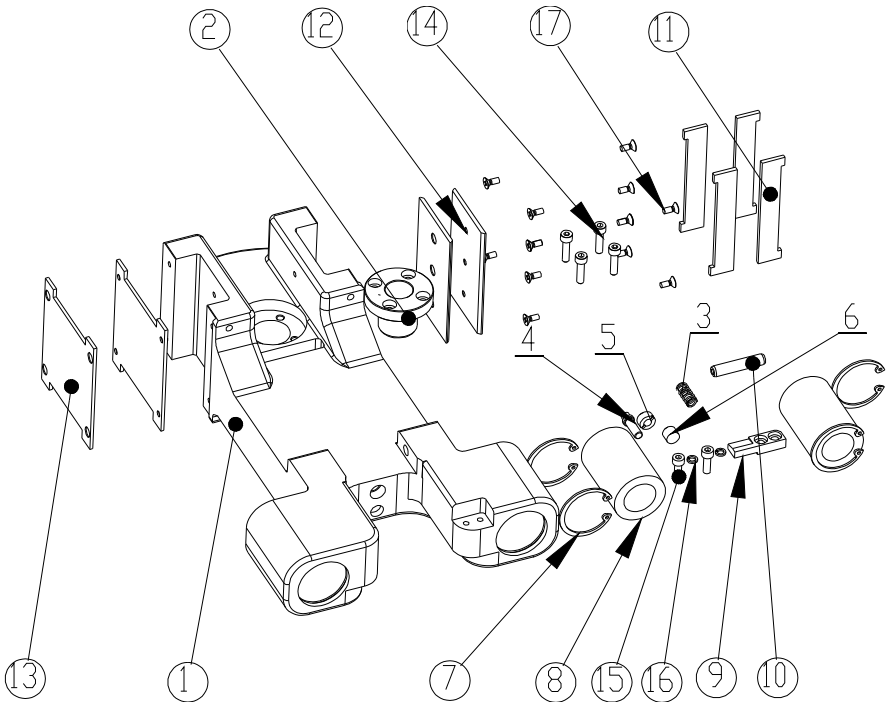
No.	Part No.	Description	Qty
1	SHH-VI.05-01	Main Shaft	1
2	SHH-VI.05-02	Lower Bearing Holder	1
3	SHH-VI.05-03	Upper Bearing Holder	1
4	GB/T70	Inner Hexagon Cylinder Head Screw M6x20	8
5	SHH-VI.05-04	Clamping Lead Screw	1
6	GB/T276-94	Bearing 6004-2z	2
7	SHH-VI.05-05	Halved Circlip	2
8	SHH-VI.05-06	Lead Screw Bush	1
9	SHH-VI.05-07	Clamping Shaft	1
10	GB/T276-94	Bearing 6002-2z	1
11	GB/T276-94	Bearing 6202-2z	1
12	GB1096-79	Flat Key 5x20	3
13	GB/1096-79	Flat Key C4x18	1
14	GB894.1-86	Circlip (15)for Shaft	1
15	SHH-VI.05-08	Guide Shaft	1
16	GB/T276-94	Bearing 6001-2z	1
17	SHH-VI.05-09	Bush	1
18	GB1096-79	Flat Key	1
19	SHH-VI.05-10	Bevel Pinion	1
20	SHH-VI.05-11	Clamping Driven Bevel Gear	1
21	SHH-VI.05-12	Clamping Driving Bevel Gear	1
22	GB/T 93-1987	Spring Washer 6	2

Tensioning Pulley Assembly



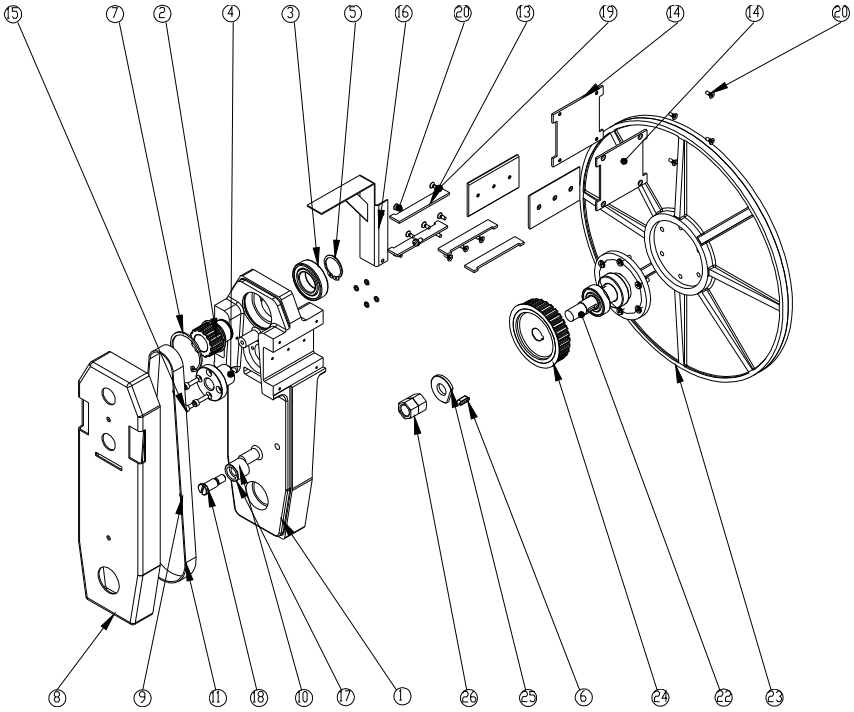
No.	Part No.	Description	Qty
1		Tensioning Pulley,Ribbed Belt	1
2		Tensioning Pulley	1
3	GB/T 276-94	Bearing 6002-2z	2
4	GB 894.1-86	Circlip(15)for Shaft	1
5	GB 893.1-86	Circlip(32)for Hole	1

Assembly of Bottom Plate Arm



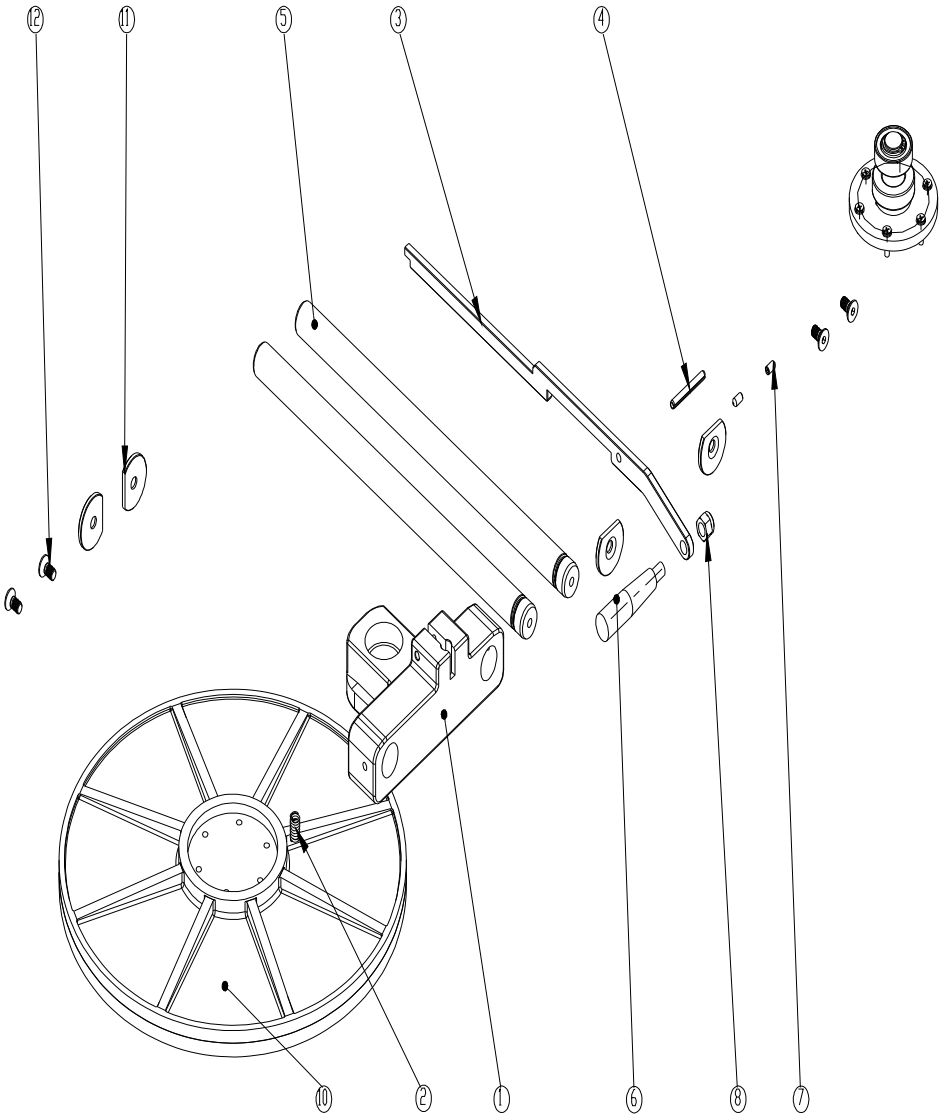
No.	Part No.	Description	Qty
1		Lowe Support Arm,G5	1
2		Threaded Nut, Left	1
3	HB 362-65	Pop-up Spring,Bottom Plate	1
4		Pop-up Pin,Bottom Plate	1
5		Num	1
6		Shock Absorbing Pad,Active Base	1
7	GB 893.1-86	Circlip (40)for Hole	4
8		Line Bearing 25x40x59	2
9		Square Stopper	1
10	GB/T 879.1-2000	Spring Type Cylinder Pin 8x40	1
11		Side Paneling	4
12		Base Paneling	2
13		Covering Plate,Paneling	2
14	GB/T 70.1-2000	Hexagon Cylinder Head Screw M5x20	4
15	GB/T 70.1-2000	Hexagon Cylinder Head Screw M5x16	2
16	GB/T 93-1987	Spring Washer 5	2
17	GB/T 819.1-2000	Crossed Counter Head Screw M4x10	14

Assembly of Clamping Plate Arm



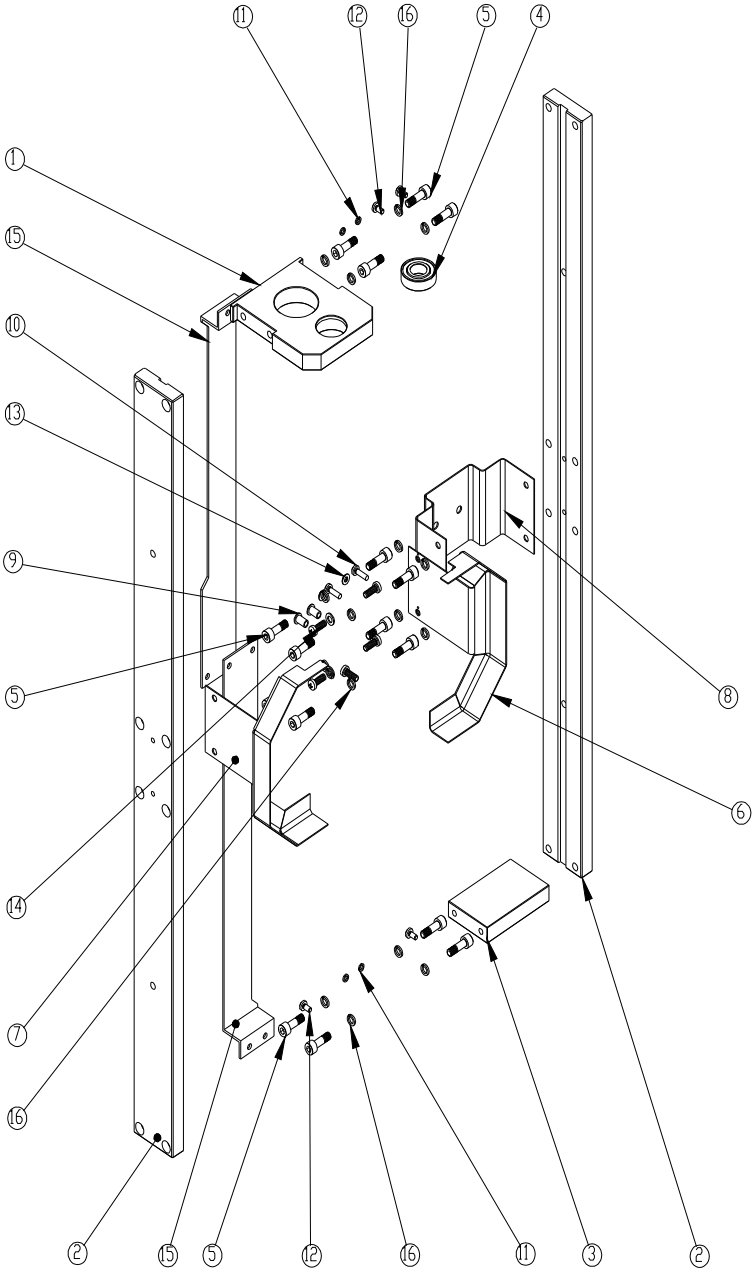
No.	Part No.	Description	Qty
1	G5.04-04	Upper Support Arm	1
2	SHH-VI.04-01	Small Synchronous Pulley	1
3	GB/T276-94	Bearing 6006-2z	1
4	SHH-VI.04-05	Nut,Right	1
5	GB894.1	Circlip(30)For Shaft	1
6	GB1096-79	Plain Key	1
7	GB893.1	Circlip (55)for Hole	1
8	G5.04-06	Shield	1
9	GB/T818	Crossed Round Head Screw M5x10	2
10	GB95-85	Plain Washer	2
11	322L075	Synchronous Belt	1
12	SHH-VI.06-09	Bottom Paneling	2
13	SHH-VI.06-08	Side Paneling	4
14	SHH-VI.06-10	Covering Plate for Paneling	2
15	GB/T70.1-2000	Inner Hexagon Cylinder Head Screw M5x20	4
16	G5.04-08	Position Reflection Plate	1
17	SHH-VI.04-10	Ring	1
18	SHH-VI.04-09	Fastening Screw	1
19	GB/T 819.1-2000	Crossed Counter Head Screw M4x16	2
20	GB/T 819.1-2000	Crossed Counter Head Screw M4x20	12
21	GB/T 93-1987	Spring Washer 5	4
22		Clamping Plate Shaft Assembly	1
23	SHH-VI.04	Clamping Plate Assembly	1
24	SHH-VI.04-02	Big Synchronous Pulley	1
25	GB891	Shaft End Circlip B401	1
26	GB/T 6170-2000	Nut M16	2

Assembly of Active Seat

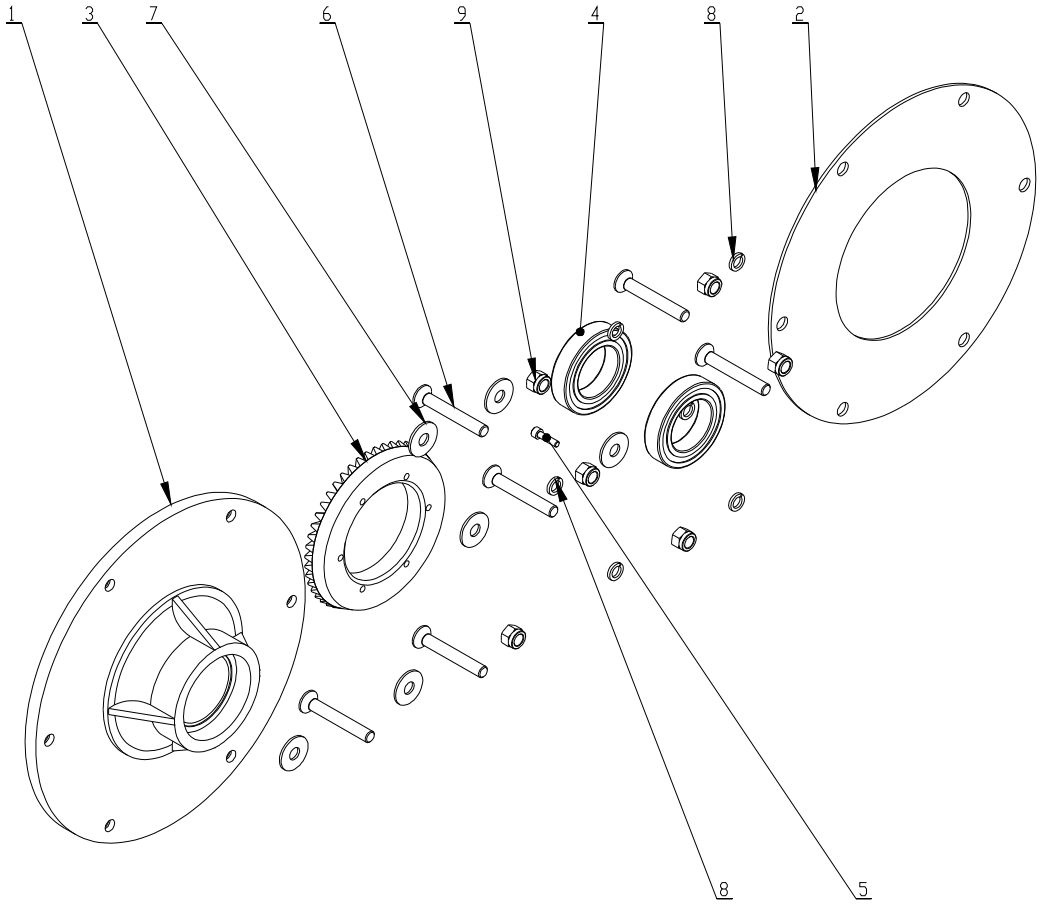


No.	Part No.	Description	Qty
1	G5.07-01	Fixing Piece,G5	1
2	SHH-VI.07-04	Locking Spring	1
3	SHH-VI.07-05	Limit Bar	1
4	GB879-86	Spring Type Cylinder Pin 6x50	1
5	G5.07-06	Cylinder Guide Shaft ,G5	2
6		Rotary Handle	1
7	GB/T78-2000	Inner Hexagon Cone Head Screw	2
8	GB889-1986	Locking Nut M10	1
9		Bottom Plate Shaft Assembly	1
10		Bottom Plate Union	1
11	GB891	Guide Shaft End Circlip	4
12		B18.3.5M - 8 x 1.25 x 16 Socket FCHS -- 16S	4

Guide Shaft Assembly



No.	Part No.	Description	Qty
1	SHH-VI.03-02	Upper Stopper	1
2	SHH-VI.03-01	Guide Shaft	2
3	SHH-VI.03-03	Lower Stopper	1
4	GB/T276-94	Bearng 6002-2z	1
5	GB/T70	Inner Hexagon Cylinder Head Screw M6x20	16
6	SHH-VI.03-04	Left Shield	1
7	SHH-VI.03-05	Right Shield	1
8	SHH-VI.03-06	Front Shield	1
9	GB/T17880.1-1999	Riveted Pant Head Screw M4x14	2
10	GB/T 818-2000	Crossed Round Head Screw M4x14	2
11	GB/T 93-1987	Spring Washer 4	6
12	GB818-2000	Crossed Round Head Screw M4x8	4
13	GB/T 97.2-1985	Plain Washer 4	2
14	GB/T 818-2000	Crossed Round Head Screw M5x14	5
15	SHH-VI.03-07	Side Screw Shield	2
16	GB/T 93-1987	Spring Washer 6	16
17	GB95-85	Plain Washer 5	2
18	GB/T 93-1987	Spring Washer 5	3



No.	Part No.	Description	Qty
1	SHH-VI.01-01	Big Flange	1
2	SHH-VI.01-03	Shock Absorbing Pad,Big Flange	1
3	SHH-VI.01-02	Big Cone Bevel	1
4	GB/T276-94	Bearing 6009-2z	2
5	GB/T70.1-2000	Inner Hexagon Cylinder Head Screw M5x20	1
6	GB/T70.3-2000	Inner Hexagon Countersunk Screw M5x20	6
7	GB96-85	Big Washer 10	6
8	GB93-87	Spring Washer 10	6
9	GB889-1986	Locking Nut M10	6

Resetting Parameters of Inverter

For the machine you've received, all parameters of the frequency converter have been preset (read only). To reset these parameters, change 01 of P76 into 00 and save it. Procedures go as below:

Press [MODE] button until LCD displays [P].
Press [▲][▼] until the parameter to be reset appears.
Press [ENTER] to be ready to reset the parameter.
Press [▲][▼] to reset the parameter.
Press [ENTER] to save the parameter already reset.
Press [MODE] to return to [F] (for setting frequency).

Parameter to be Reset

P01		Source of Operational Signals
P02		Motor Stop Mode Setting
P03		Max Operation Frequency
P04		Max Voltage Frequency
P05		Max Output Voltage
P06		Middle Frequency Setting
P07		Middle Voltage Setting ***Affect Clamping Force***
P08		Min Output Frequency
P09		Min Output Voltage ***Affect Big cans Back Home***
P10		First Acceleration Time
P11		First Reduction Time ***Too Small Inverter Over voltage***
P17		Clamping Speed ***Affect Clamping Force***
P18		Releasing Speed
P19		Position Seeking Speed
P20		Starting Speed

P21		Low Operation Speed
P22		Middle Operation Speed(150) ***35(175)***
P23		High Operation Speed
P54		Auto Operation Torque Compensation ***Affect Clamping Force and Big Cans Back Home***
P60		Over Torque Check ***Stop running while over torque***

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